REMARKS

The present Amendment cancels claims 1-16 and adds claims 17-20. Therefore, the present application has pending claims 17-24.

Information Disclosure Statement

In the Office Action, the Examiner indicated that a translation of Japanese Patent Document No. 2000-155859 was not provided with the Information Disclosure Statement (IDS) filed on February 12, 2002, and thus was not considered by the Examiner. However, the Examiner's attention is directed to the "Other Documents" section of the IDS, which lists Patent Abstracts of Japan for Japanese Patent Document No. 2000-155859. This document is an English-language abstract of the Japanese Patent, and it appears that it was considered by the Examiner.

Furthermore, 37 CFR 1.98(a)(3)(i) provides that an IDS shall include:

> A concise explanation of the relevance, as it is presently understood by the individual designated in § **1.56**(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. The concise explanation may be either separate from applicant's specification or incorporated therein.

The Patent Abstracts of Japan filed with the IDS satisfies this requirement. Therefore, the Examiner should have indicated that the Examiner considered Japanese Patent Document No. 2000-155859. The Examiner's reconsideration is respectfully requested.

35 USC §112 Rejections

Claims 2, 3, 5, 6, 8-11, and 13-16 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. As indicated above, claims 2, 3, 5, 6, 8-11, and 13-16 were canceled. Therefore, this rejection is rendered moot, and reconsideration and withdrawal of this rejection is respectfully requested.

35 USC §101 Rejections

Claims 1-6, 8-11 and 13-16 stand rejected under 35 USC §101 as allegedly being directed to non-statutory subject matter. As indicated above, claims 1-6, 8-11 and 13-16 are canceled. Therefore, this rejection is rendered moot, and reconsideration and withdrawal of this rejection is respectfully requested.

35 USC §102 Rejections

Claims 1, 4, 7 and 12 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0107673 to Haller, et al. ("Haller"). As indicated above, claims 1, 4, 7 and 12 were canceled. Therefore, this rejection is rendered moot, and reconsideration and withdrawal of this rejection is respectfully requested.

35 USC §103 Rejections

Claims 2, 3, 5, 6, 8-11, and 13-16 stand rejected under 35 USC §103(a) as being unpatentable over Haller in view of *What Can Go Wrong with FEA?* By Klaus-Jurgen Bathe ("Bathe"). As indicated above, claims 2, 3, 5, 6, 8-11, and 13-16 were

canceled. Therefore, this rejection is rendered moot, and reconsideration and withdrawal of this rejection is respectfully requested.

New Claims 17-20

New claims 17-20 were added so as to more clearly describe the features of the present invention. Specifically, the claims were added to more clearly describe that the present invention is directed to an analytical model preparing apparatus as recited, for example, in independent claim 17.

The present invention as recited in claim 17 provides an analytical model preparing apparatus. The apparatus includes a means for entering a shape model for analysis of the shape model. The apparatus also includes a database that maps at least one already prepared shape model with an analytical model. Additionally, the analytical model preparing apparatus includes a degree of approximation calculating means and an analytical model preparing means. The degree of approximation calculating means includes a means for comparing the shape elements in the shape model to be analyzed with the shape elements in the already prepared shape model, a means for calculating a degree of approximation based on the number of shape elements of the shape model to be analyzed associated with the shape elements of the already prepared shape model, and a means for displaying the already prepared shape models sequentially from larger to smaller degrees of approximation on a display screen, and in response to an instruction, selecting at least one already prepared shape model from the already prepared shape models displayed. The analytical model preparing means prepares the

analytical model of the shape model to be analyzed by using information prepared for the already prepared shape model selected. The prior art does not disclose all of these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. More specifically, the features are not taught or suggested by either Haller or Bathe, whether taken individually or in combination with each other.

Haller discloses the construction of a model using a computer aided design system. However, there is no teaching or suggestion in Haller of the analytical model preparing apparatus as recited in the claims.

Haller's method constructs a model using a computer aided design system. The method includes constructing a feature in a three dimensional model based on data input by a user. After construction of the feature, a part configured to compatibly couple with the feature is automatically identified based on design attributes of the feature. The part can be selected from a parts library that includes data representing parts and their geometric characteristics. In another aspect, the Haller method automatically generates a part or other model component that can be coupled to the feature. The part generation includes querying a component model repository (i.e., a model library) to retrieve a component model. The model is retrieved based on compatibility between an attribute of the component model and a design attribute of the feature.

In the present invention, the analytical model preparing apparatus includes a degree of approximation calculating means. This degree of approximation calculating means includes: means for comparing the shape elements in the shape model to be analyzed with the shape elements in the already prepared shape model; means for calculating a degree of approximation based on the number of shape elements of the shape model to be analyzed associated with the shape elements of the already prepared shape model; and means for displaying the already prepared shape models sequentially from larger to smaller degrees of approximation and selecting at least one already prepared shape model from the already prepared shape models displayed. Haller does not disclose a degree of approximation calculating means as claimed.

Therefore, Haller fails to teach or suggest "degree of approximation calculating means including: means for comparing the shape elements in the shape model to be analyzed with the shape elements in the already prepared shape model and associating with each other, means for calculating a degree of approximation based on the number of shape elements of the shape model to be analyzed associated with the shape elements of the already prepared shape model, and means for displaying the already prepared shape models sequentially from larger to smaller degrees of approximation on a display screen, and in response to an instruction, selecting at least one already prepared shape model from among said already prepared shape models displayed" as recited in independent claim 17.

The above noted deficiencies of Haller are not supplied by any of the other references, particularly Bathe. Therefore, combining the teachings of Bathe with Haller still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Bathe discloses the use of finite-element method to solve mathematical models. However, there is no teaching or suggestion in Bathe of the analytical model preparing apparatus as recited in the claims.

In Bathe, finite-element methods are used to solve mathematical models. For example, in an analysis of a valve housing of axisymmetric geometry and axisymmetric loading, the complete mathematical model is obtained by specifiying the geometry and dimensions, support conditions, material constraints, and loading. The approximation of this exact solution can be obtained using finite-element methods.

As previously discussed, the present invention includes a degree of approximation calculating means. Bathe does not disclose a degree of approximation calculating means, as claimed. More specifically, Bathe does not disclose a degree approximation calculating means including: means for comparing the shape elements in the shape model to be analyzed with the shape elements in the already prepared shape model; means for calculating a degree of approximation based on the number of shape elements of the shape model to be analyzed associated with the shape elements of the already prepared shape model; and means for displaying the already prepared shape models sequentially from larger to

smaller degrees of approximation and selecting at least one already prepared shape model from the already prepared shape models displayed, as claimed.

Therefore, Bathe fails to teach or suggest "degree of approximation calculating means including: means for comparing the shape elements in the shape model to be analyzed with the shape elements in the already prepared shape model and associating with each other, means for calculating a degree of approximation based on the number of shape elements of the shape model to be analyzed associated with the shape elements of the already prepared shape model, and means for displaying the already prepared shape models sequentially from larger to smaller degrees of approximation on a display screen, and in response to an instruction, selecting at least one already prepared shape model from among said already prepared shape models displayed" as recited in independent claim 17.

Haller and Bathe suffer common deficiencies relative to the features of the present invention as recited in the claims. Therefore, combining the teachings of Bathe with Haller would not render obvious the features of the present invention as now more clearly recited in the claims.

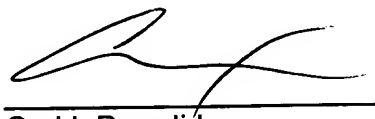
The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to Haller and Bathe.

In view of the foregoing amendments and remarks, Applicants submit that claims 17-20 are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 389.41181X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



Carl I. Brundidge
Registration No. 29,621

CIB/DKM/sdb
(703) 684-1120